

Latching Relays

El.italia serie FW-FRL10N

Features

Single and double coils magnet latching relay
 50A switching capacity
 Lamp load to 5.000W
 PC board mounting
 Manual switch function available
 Dust cover

Ordering information

FRL10N A - L1 DC12V R

1 2 3 4 5

1 Relay model	5 Polarity: NIL: Standard type; R: Reverse polarity
2 Contact arrangement: A: 1 Form A	Note: RoHS : RoHS compliant relay
3 Sort: L1: 1 coil latching; L2: 2 coils latching	RoHS-I : AgNi contact
4 Rated voltage	RoHS-N: AgSnO ₂ contact

Coil rating

Rated voltage (V)	Coil resistance Ω +/- 10%		Switching voltage (V DC)	Pulse magnitude (ms)	Power consumption (W)	Operate time (ms)	Release time (ms)
	1 Coil	2 Coils					
6	24	12+12	4.8	≥50	1 coil: 1.5	≤15	≤15
9	54	27+27	7.2				
12	96	48+48	9.6				
24	384	192+192	19.2		2 coils: 2 x 3.0		
48	1536	768+768	38.4				

CAUTION: 1. The use of any coil voltage less than the rated coil voltage will compromise the operation of the relay.
 2. Pickup and release voltage are for test purposes only and are not to be used as design criteria.

Characteristics

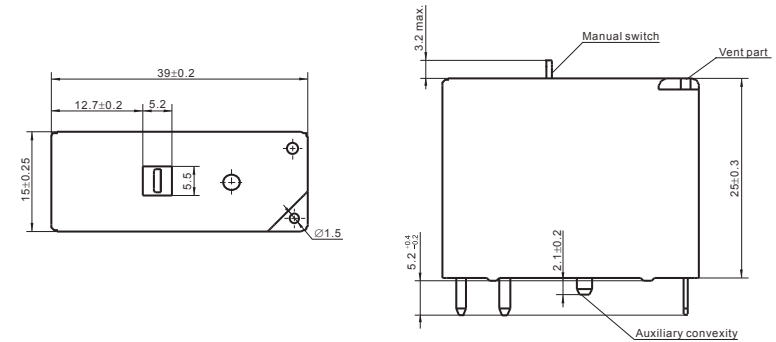
Contact arrangement	SPST (1 Form A)
Contact material	Silver alloy
Contact resistance	≤20mΩ Max.
Contact rating (resistive)	50A 277VAC (Resistive load) 5.000W 240VAC (Incandescent lamp); 16A 277VAC (Inductive load) 5HP 240VAC (Motor load)
Switching power	12,500VA Max.
Switching voltage	AC 440V Max.
Switching current	50A Max.
Insulation resistance	1,000MΩ Min. (500VDC)
Dielectric strength	1,500VAC (50Hz/min) Between open contacts 4,000VAC (50Hz/min) Between coil and contact
Creepage distance	8mm
Shock resistance	Functional : 98m/s ² 11ms Destructive: 980m/s ² 11ms
Vibration resistance	1.5mm Double amplitude 10-55Hz
Terminals strength	10N
Solderability	235°C ±2°C 3s ±0.5s
Ambient temperature	-40°C to +70°C
Humidity	85% RH, 40°C
Operation life	Mechanical 1 x 10 ⁶ Electrical 1 x 10 ⁴
Weight	25g Approx.

(Specifications are subject to change without notices.)

Dimensions

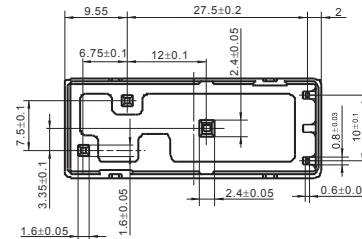
mm

Outline Dimensions

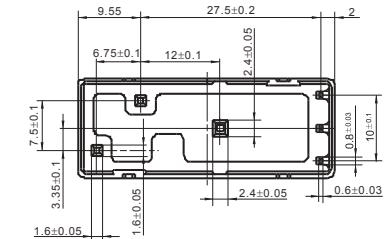


(Bottom view)

Single coil latching

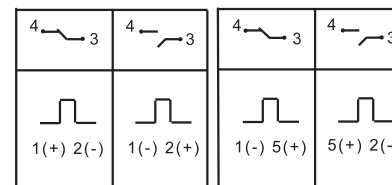


Double coils latching



Wiring diagram (Bottom view)

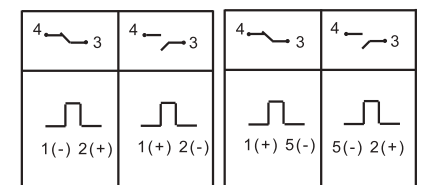
Standard polarity



Single coil, 1 Form A

Double coils, 1 Form A

Reverse polarity



Single coil, 1 Form A

Double coils, 1 Form A